

Date: Thursday, 3/30/2006 8:33:20 AM
 User: Kim Johnston

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: MID TUBE ASSEMBLY
Job Number	: 26430		
Estimate Number	: 10469		
P.O. Number	: N/A	Part Number	: D3391023
This Issue	: 3/30/2006 S.O. No. : N/A	Drawing Number	: D3391 REV D
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: N/A Type : LANDING GEAR	Drawing Revision	: D
Previous Run	: 26429	Material	: N/A
Written By	: <u>See Comment Below</u>	Due Date	: 4/20/2006 Qty: 1 Um: Each
Checked & Approved By	: <u>06.03.30</u>		
Comment	: Est. A 05.10.20 New Issue KJ/EC Est. B 06.02.10 ECN773 dwg rev.D EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D25001100	Skidtube Extrusion
-----	-----------	--------------------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

SKIDTUBE EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-100	Extrusion	B24593 BE 06-04-04 ①

2.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
-----	----------------	-------------------------



Comment: LANDING GEAR RESOURCE 1

1-Cut tube to finish length as per Dwg D3391 BE 06-04-04 ①

2-Identify as D3391-023 BE 06-04-04 ①

3-Drill pilot holes using DT8796 as per Dwg D3391 BE 06-04-04 ①

4-Open float bag holes to Ø0.250" as per Dwg D3391 using DT8796D visual aid Jig BE 06-04-04 ①

5-C'sink float bag holes as per Dwg D3391 BE 06-04-04 ①

6-Open remaining holes to Ø0.375" BE 06-04-04 ①

7-Remove .030" from Fwd indexing Ridge as per Dwg D3391 BE 06-04-04 ①

8-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391 BE 06-04-04 ①

9-Deburr BE 06-04-04 ①

10-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.208" holes with paint marker BE 06-04-04 ①

11-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.208" (14 holes) as per Dwg D3391 BE 06-04-04 ①

12-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.250" and c'sink (20 holes) as per Dwg D3391 BE 06-04-04 ①

13-Open .375" holes to .438" BE 06-04-04 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 3/30/2006 8:33:20 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 26430

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

114-Deburr and blow out all chips from inside tube

BF 06-04-04 (4)

3.0

QC5

INSPECT WORK TO CURRENT STEP



06-04-05

Comment: INSPECT WORK TO CURRENT STEP

4.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

IT 06-04-06 (1)

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

DP 06-4-6 (1)

6.0

D33891

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEB

Pick:

Qty

Part Number

Description

Batch

1

D3389-1

Web

~~023 B 28437~~

A/R

Sikaflex-241/-291

M100480

Sikaflex expire date:

06-11-01

Start: 06-04-05

Time: 10:30

IT 06-04-05 (1)

Finish: 06-04-06

Time: 02:30

IT 06-04-06 (1)

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)

IT 06-04-05 (1)

8.0

NAS1330C3KB116

Insert



Comment: Qty.: 20.0000 Each(s)/Unit Total: 20.0000 Each(s)

Insert

Pick:

Qty

Part Number

Description

Batch

20

NAS1330C3KB116

Insert

M19014

am 06-04-25 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: *SD* Date: 06/04/27

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 3/30/2006 8:33:20 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 26430

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

NAS1330C3KB166



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)

RivnuT

Pick:

Qty Part Number

Description

Batch

10

NAS1330C3KB166

Insert

M 100738

10.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Install inserts as per Dwg D3391

Q-m 06-04-25 (1)

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect each insert using DT8821

MM 06.04.25 (1)

12.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

Use paint screws to mask inserts.

DC 06/04/18 (1)

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FC 06 04 25 (1)

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

DC 06/04/25 (1)

15.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

DP 06/04/27 (1)

Job Completion



U 06.04.27

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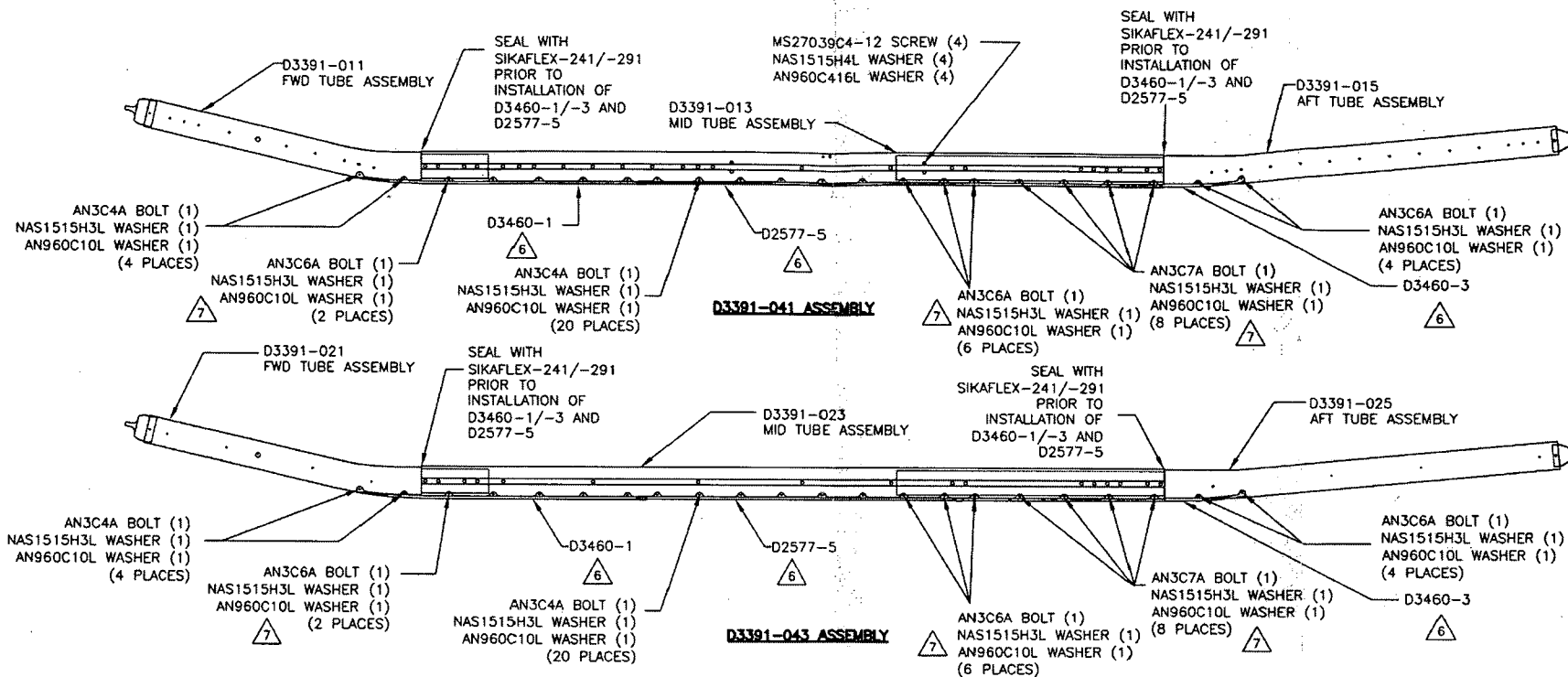
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-041/-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY - 041	QTY - 043	PART NUMBER	DESCRIPTION
X	X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
		D3391-043	FLOAT SKIDTUBE ASSEMBLY
1		D3391-011	FWD TUBE ASSEMBLY
1		D3391-013	MID TUBE ASSEMBLY
1		D3391-015	AFT TUBE ASSEMBLY
	1	D3391-021	FWD TUBE ASSEMBLY
	1	D3391-023	MID TUBE ASSEMBLY
	1	D3391-025	AFT TUBE ASSEMBLY
24	24	AN3C4A	BOLT
12	12	AN3C6A	BOLT
8	8	AN3C7A	BOLT
44	44	NAS1515H3L	WASHER
44	44	AN960C10L	WASHER
4		MS27039C4-12	SCREW
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
1	1	D2577-5	WEARSHOE
1	1	D3460-1	WEARSHOE
1	1	D3460-3	WEARSHOE

GENERAL NOTES

- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 'E' SIZE HOLES (#0.250-#0.257) FOR WEARSHOE INSERTS.
- C/SINK #0.391/#0.425 x 100" AS APPLICABLE AND INSTALL INSERTS EXCEPT WHERE INDICATED.
- APPLY A LAYER OF SIKAFLEX -241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES
- DO NOT TORQUE, HAND TIGHTEN ONLY

△

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06.01.27

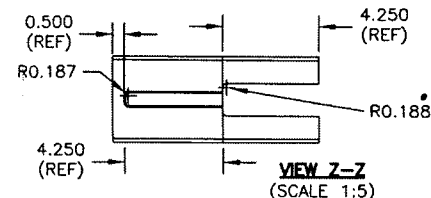
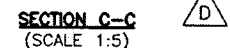
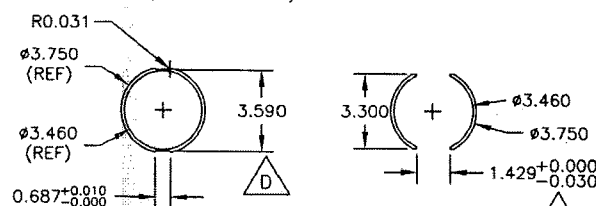
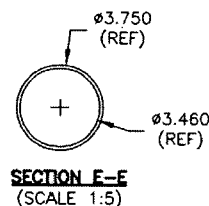
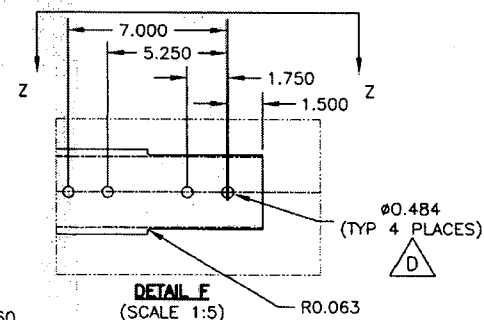
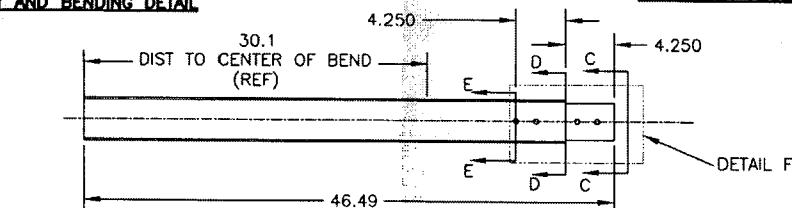
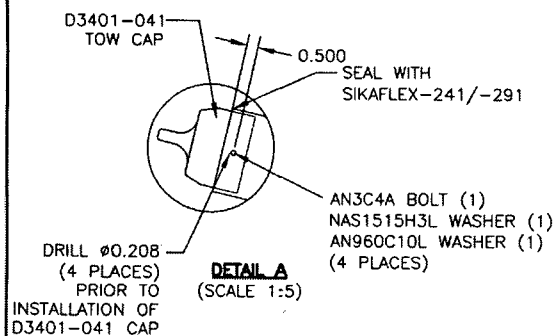
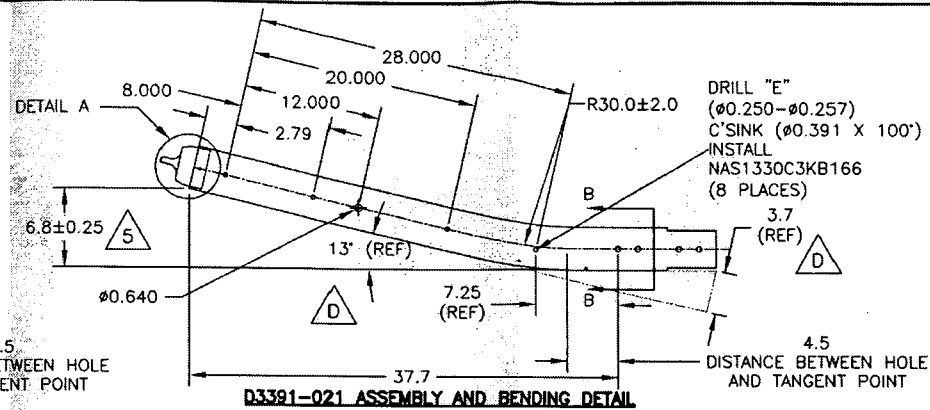
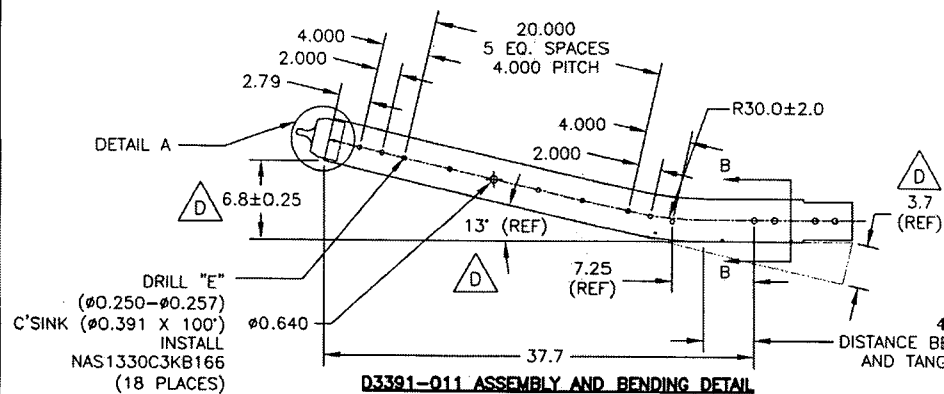
D	06.01.23	UPDATE TOLERANCE, CHANGE HOLE SIZE
C	05.09.27	LENGTHEN AFT EXTENSION
B	05.06.10	DRAWING UPDATES
A	05.02.07	NEW ISSUE
DESIGN	PH	DRAWN BY
CHECKED	PH	APPROVED
DATE	06.01.23	DRAWING NO. D3391
		TITLE 412 FLOAT SKIDTUBE
		REV. D SHEET 1 OF 5
		SCALE NTS

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NO. 26430
WORK ORDER



D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
4	4	AN3C4A	BOLT
4	4	NAS1515H3L	WASHER
4	4	AN960C10L	WASHER
24	14	NAS1330C3KB166	INSERT

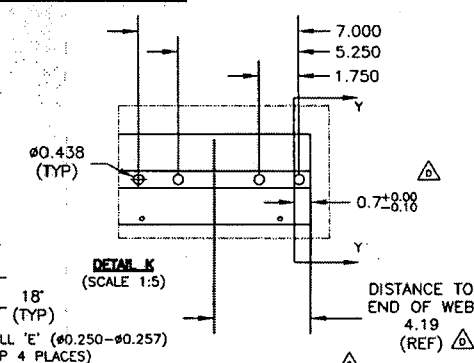
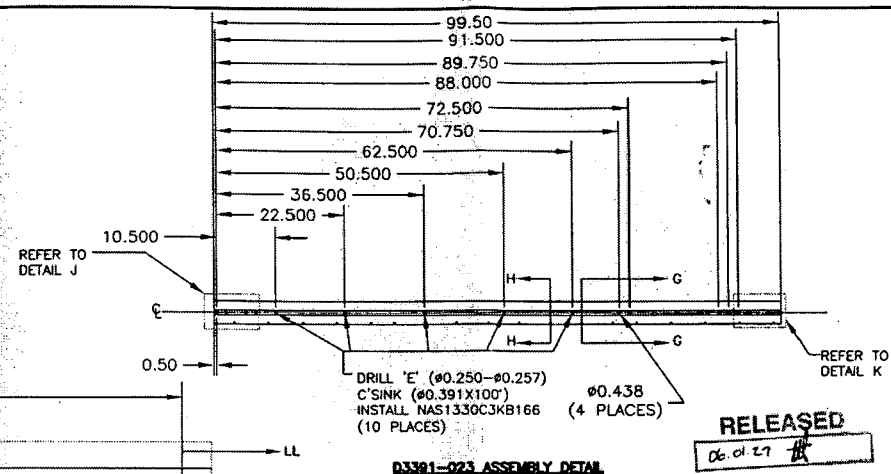
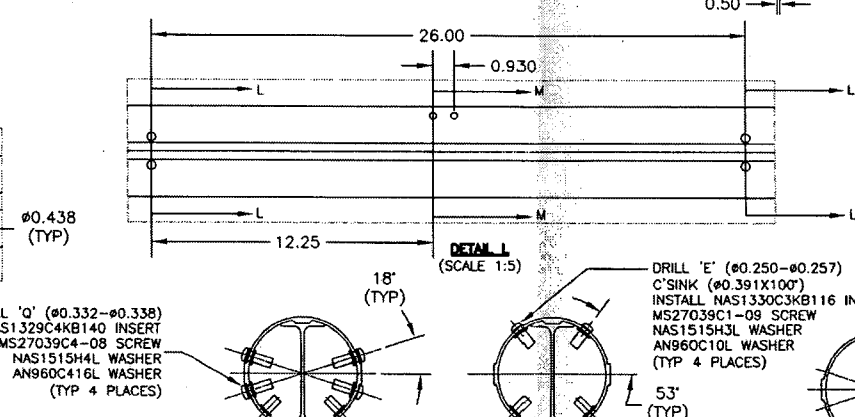
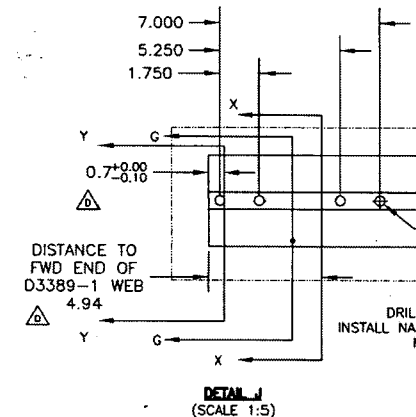
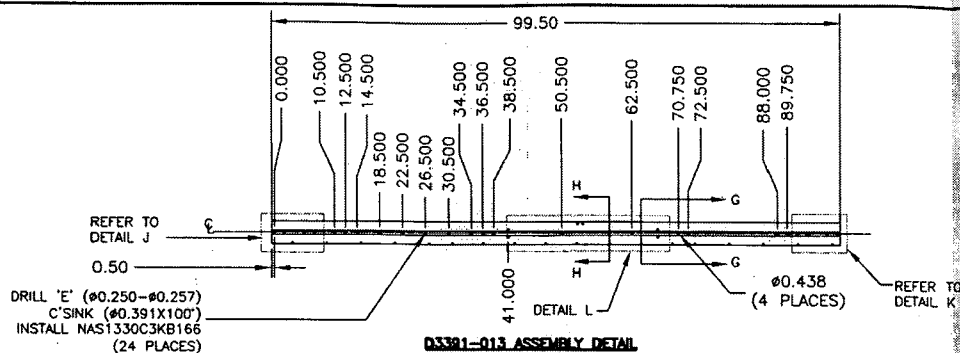
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5 DRILL "E"
 (Ø0.250-Ø0.257)
 C'SINK (Ø0.391 X 100')
 INSTALL
 NAS1330C3KB166
 (6 PLACES)

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CHECKED #	APPROVED #	DRAWING NO. D3391
DATE 06.01.23	TITLE 412 FLOAT SKIDTUBE	REV. D SHEET 2 OF 5 SCALE 1:10

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D3391-013/-023 MID TUBE ASSEMBLY PARTS LIST

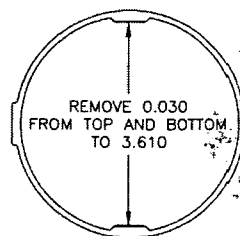
QTY - 013	QTY - 023	PART NUMBER	DESCRIPTION
X	X	D3391-013	MID TUBE ASSEMBLY
		D3391-023	MID TUBE ASSEMBLY
1	1	D2500-1-100	EXTRUSION
1	1	D3389-1	WEB
24	20	NAS1330C3KB116	INSERT
24	10	NAS1330C3KB166	INSERT
4		NAS1329C4KB140	INSERT
4		NAS1515H3L	WASHER
4		AN960C10L	WASHER
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
4		MS27039C1-09	SCREW
4		MS27039C4-08	SCREW

D3391-013/-023 MID TUBE ASSEMBLY

1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION

2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241

SECTION I-I (SCALE 1:4)



SECTION X-X (SCALE 1:2)

SECTION M-M (SCALE 1:4)

REMOVE 0.225 FROM TOP AND BOTTOM TO 3.800 (0.7 FROM BOTH ENDS)

SECTION Y-Y (SCALE 1:4)

SECTION II-II (SCALE 1:4)

SECTION G-G (SCALE 1:4)

SECTION H-H (SCALE 1:4)

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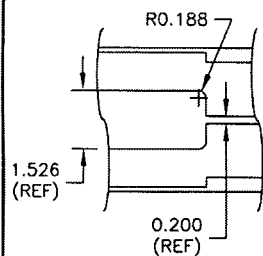
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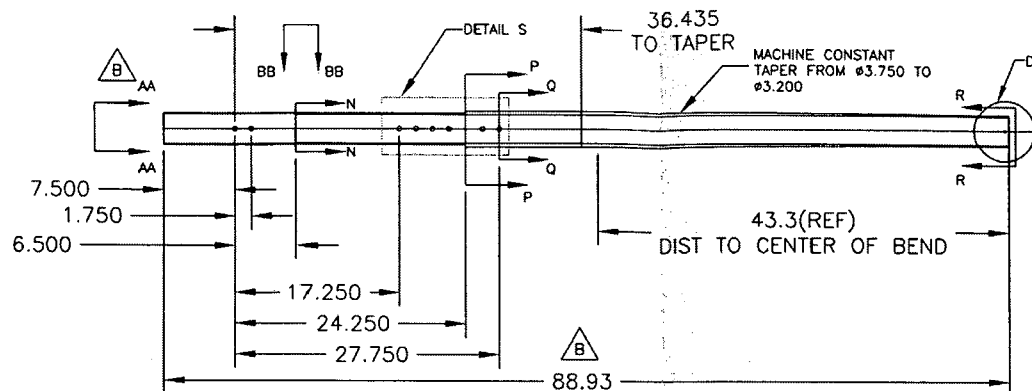
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TITLE 412 FLOAT SKIDTUBE
REV. D
SHEET 3 OF 5
SCALE 1:20

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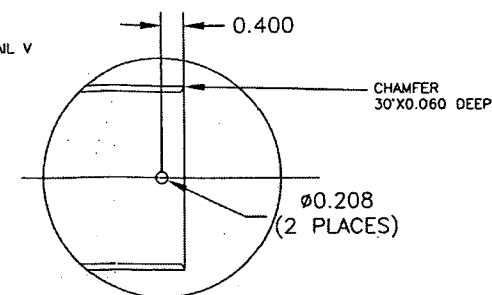
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VIEW BB-BB
(SCALE 1:3)



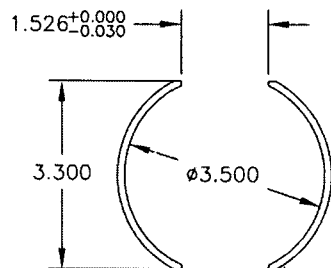
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



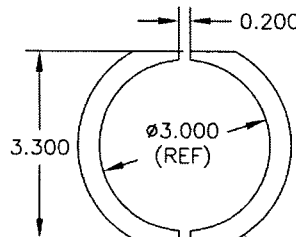
DETAIL V
(SCALE 1:2)

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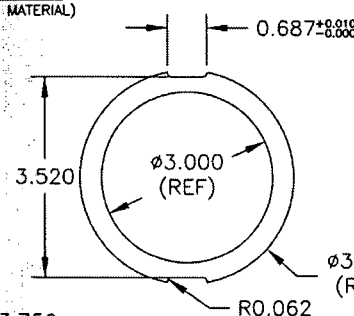
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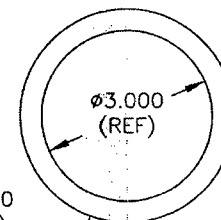
SECTION AA-AA
(SCALE 1:2)



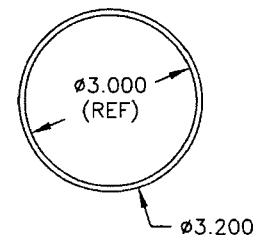
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(SCALE 1:2)



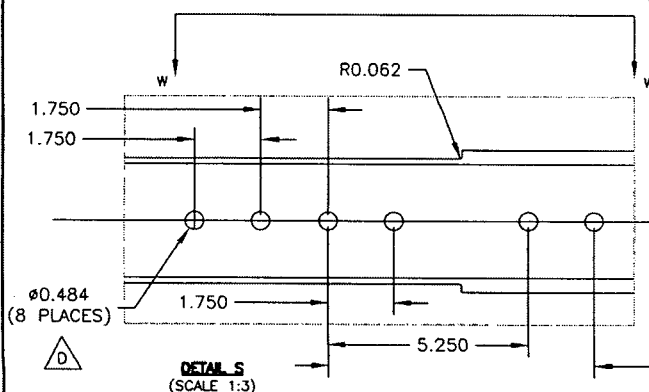
SECTION P-P
(SCALE 1:2)



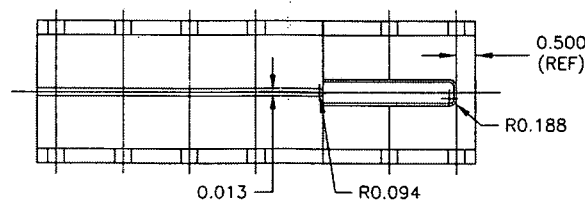
SECTION Q-Q
(SCALE 1:2)



SECTION R-R
(SCALE 1:2)



DETAIL S
(SCALE 1:3)



VIEW W-W
(SCALE 1:3)

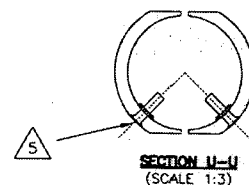
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DESIGN	PH	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA	REV. D
CHECKED	#	APPROVED	#	DRAWING NO. D3391	SHEET 4 OF 5
DATE	06.01.23	TITLE	412 FLOAT SKIDTUBE	SCALE	1:12

06.01.27 *



D3391-015 INSERT INSTALLATION DETAIL
(SEE TABLE)

C'SINK AND INSTALL AESS10KBXXX AND/OR NAS1330C3KBXXX IN HOLES MARKED CS1-CS6 AS FOLLOWS

HOLE MARKED	QTY D3391-015	QTY D3391-025	C-SINK	P/N
C51	18	14	Ø0.425	AESS10KB366
C52	4		Ø0.391	AESS10KB366
C53	4	2	Ø0.391	NAS1330C3KB316
C54	4	2	Ø0.391	NAS1330C3KB286
C55	4		Ø0.391	NAS1330C3KB216
C56	12	8	Ø0.391	NAS1330C3KB166

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
18	14	AESS10KB366	INSERT
4	2	NAS1330C3KB316	INSERT
4	2	NAS1330C3KB266	INSERT
4		NAS1330C3KB216	INSERT
12	8	NAS1330C3KB166	INSERT
4		NAS1330C4KB151	INSERT
2	2	AN3C4A	BOLT
2	2	NAS1515H3L	WASHER
2	2	AN960C10L	WASHER



D3391-025 BENDING AND ASSEMBLY DETAIL



D3321-025 INSERT INSTALLATION DETAIL
(SEE TABLE)



DRILL 'Q' (ø0.332-ø0.338)
C SINK (ø0.529X100ø)
NAS1330C4KB151 INSERT (1)
(4 PLACES)

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DESIGN

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PORT HADLOCK, OH

CHECKED _____

APPROVED

DATE
06.01.23

DRAWING NO.

D.3.391

	0000
TOTAL	

FILE	DATE	TIME	BY	REMARKS
100-100000	10-10-1964	10:00	W. J. B.	...

REV. D.

SHEET 5 OF 5

3

SCALE

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